



**National Heart Attack Alert Program
Coordinating Committee
and Subcommittees**

MEETING SUMMARY REPORTS

**October 5-6, 1998
Alexandria, VA**

TABLE OF CONTENTS

COORDINATING COMMITTEE MEETING	1
Welcome and Introductions	1
5-Year Retreat Recommendations: Overview and Progress Report	1
Executive Committee Report	3
Subcommittee Reports	3
Discussion: Chest Pain Center Position Paper	4
Informatics For The NHAAP: National Library of Medicine Solicitation and Overview of Proposals	5
Healthy People 2010	5
Report on Public Access Defibrillation Phase 1 (PAD-1) Trial	7
Reports From Organizations	7
Closing Remarks/Adjournment	8
 EXECUTIVE COMMITTEE MEETING	 10
Welcome and Introductions	10
Reports From Subcommittees	10
Proposal For Working Group on Primary Angioplasty and Acute Myocardial Infarction	11
Review of Coordinating Committee Agenda	11
Overview of Plans for Informing the Public Education Advisory Group About the Results of the REACT Research Program	12
Next Meeting/Adjournment	12
 EDUCATION SUBCOMMITTEE MEETING	 14
Welcome and Introductions	14
Marketing Progress Reports	14
Report on Journal Articles in Development	15
Update on REACT Results and Next Steps	15
Presentation of the REACT Web Site	16
Review of Educational Priorities	16
Adjournment	17
 HEALTH SYSTEMS SUBCOMMITTEE MEETING	 19
Welcome and Introductions	19
Proposal to the National Committee For Quality Assurance For Emergent Cardiovascular Measures: Status	19
Suggestions From Coordinating Committee Representatives For Other Institutional Measures or Partnerships	20
National Highway Traffic Safety Administration Managed Care and Emergency Medical Services Roundtable Discussions	20

TABLE OF CONTENTS (continued)

Community Planning Paper Review	21
Marketing of Community Planning Paper and Discussion	
About Its Dissemination And Implementation	21
Next Meeting/Adjournment	22
 SCIENCE BASE SUBCOMMITTEE MEETING	 24
Welcome and Introductions	24
Status Report: Chest Pain Centers Position Paper	24
Status Report: Emergency Department Technologies Working Group Update	25
Status Report: Chest Pain Critical Pathways Paper	25
Early Diagnosis of Unstable Angina and Acute MI: Overview of Materials For Primary Care Physicians	25
Science Base Subcommittee Literature Review	27
Sudden Cardiac Death: Research/Future Horizons	34
Other Issues	34
Adjournment	34



National Heart Attack Alert Program

Coordinating Committee Meeting

**October 6, 1998
Alexandria, VA**

**COORDINATING COMMITTEE MEETING
NATIONAL HEART ATTACK ALERT PROGRAM (NHAAP)
NATIONAL HEART, LUNG, AND BLOOD INSTITUTE (NHLBI)**

**Meeting Summary
October 6, 1998**

WELCOME AND INTRODUCTIONS [Ms. Mary Hand]

Ms. Hand welcomed all of the participants and expressed Dr. Claude Lenfant's regrets that he could not be present due to activities related to the 50th anniversary of the NHLBI. She introduced two new committee representatives: Dr. Robert McNutt of the American College of Physicians and Mr. Arthur Ciarkowski of the Food and Drug Administration. She also recognized the substitute representatives, Dr. Denise Hirsch of the American College of Chest Physicians and Ms. Millicent Gorham of the National Black Nurses Association.

Ms. Hand then reviewed the agenda and the contents of the meeting packet. She noted that the packet contained a copy of the July 1998 issue of the *Journal of Thrombosis and Thrombolysis*, which includes three NHAAP articles:

The National Heart Attack Alert Program: Progress at Five Years in Educating Providers, Patients, and the Public and Future Directions

Access to Timely and Optimal Care of Patients with Acute Coronary Syndromes—Community Planning Considerations: A Report by the National Heart Attack Alert Program

Educational Strategies to Prevent Prehospital Delay in Patients at High Risk for Acute Myocardial Infarction: A Report by the National Heart Attack Alert Program

**5-YEAR RETREAT RECOMMENDATIONS: OVERVIEW AND PROGRESS REPORT
[Ms. Hand]**

Ms. Hand recalled that the Coordinating Committee held a retreat in June 1996 to review the program's progress at its 5-year point, identify key areas of focus, review the Coordinating Committee's structure and processes, and examine the role of the member organizations. Within the key areas of focus that were identified, Ms. Hand noted specific achievements to date:

Evidence-based evaluation of diagnostic and treatment technologies, strategies, and protocols: A working group report on evidence-based evaluation of technologies was published in the *Annals of Emergency Medicine* in January 1997 and marketed extensively. An update of the report is actively being planned.

Health care systems and community planning: The proceedings of the managed care symposium held as part of the December 1995 Coordinating Committee were printed. Discussions have taken place with the National Committee for Quality Assurance (NCQA) and the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) regarding quality indicators. A community planning paper has also been published.

New information technologies: The symposium “New Information Technology and the National Heart Attack Alert Program: Setting a 5-Year Agenda” was held in April 1998. A draft of the proceedings is complete and a journal article is planned. The National Library of Medicine (NLM) has funded a number of technology projects that were proposed in response to a solicitation following the symposium.

Education of professionals: Three professional education publications were released since the retreat: the emergency department (ED) technologies report, the high-risk patient education report, and the community planning paper. The NHAAP still needs to educate obstetricians/gynecologists and primary care physicians, and assertively interface with provider training programs.

Education of high-risk patients: The high-risk patient education report, which encourages health care providers to counsel their high-risk patients to rehearse what to do in case of an acute myocardial infarction (AMI) to prevent prehospital delay, was published and widely distributed.

Education of patients who have been discharged from EDs and ruled out for AMI: This area has been assigned to the Science Base Subcommittee. It should be viewed as an opportunity for primary care physicians to provide followup counseling to these patients about prevention and action in case of future symptoms.

Education of the general public/bystanders: The Rapid Early Action for Coronary Treatment (REACT) study was undertaken, and its results will be presented at the November 9 meeting of the American Heart Association (AHA). The Public Education Advisory Group will be considering this issue beginning later today as it learns the results of the REACT study in a closed session.

Also at the retreat, members reviewed their relationships with their member organizations and considered ways to make their representation more effective. They suggested identifying a contact person in their organization and identified areas of interest to their organizations, possible partnerships, and steps to address the areas of focus.

Ms. Hand thanked Dr. Smith for spearheading the NHAAP technology symposium and thanked the planning committee members and advisers for their work on the symposium. Dr. Smith

also thanked the members. He then reflected on the pioneering nature of the symposium and expressed his excitement about the future of the technology explored.

EXECUTIVE COMMITTEE REPORT [Dr. Atkins]

Dr. Atkins, chair of the Executive Committee, reported that the REACT study results will be released on November 9 at the AHA's Scientific Sessions. The results will provide future direction for the NHAAP's objectives regarding public education and the dissemination of information.

SUBCOMMITTEE REPORTS

Dr. MacLeod, chair of the Health Systems Subcommittee, reported on the subcommittee's progress with the NCQA. The subcommittee has urged the accrediting body to include three indicators related to the NHAAP's goals in the Health Plan Employer Data and Information Set (HEDIS) measures. The subcommittee is awaiting responses from NCQA. Dr. MacLeod expressed his hope for productive relationships with NCQA and asked committee members to suggest other such organizations to pursue. Finally, Dr. MacLeod commended a roundtable process between emergency medical services (EMS) providers and managed care organizations sponsored by the National Highway Transportation Safety Association (NHTSA) and affirmed the NHAAP's support for NHTSA's ongoing work in this area.

Ms. Hand then welcomed Dr. Mark Johnson as the new chair of the Education Subcommittee. Dr. Johnson reported that an announcement about "Educational Strategies to Prevent Prehospital Delay in Patients at High Risk for Acute Myocardial Infarction: A Report by the National Heart Attack Alert Program" was sent to 80 journals and newsletters. An announcement about "Access to Timely and Optimal Care of Patients With Acute Coronary Syndromes—Community Planning Considerations: A Report by the National Heart Attack Alert Program" was sent to over 3,000 individuals. More than 3,000 additional city and county health officials were sent an invitation to receive a complimentary copy of the paper. Dr. Johnson reiterated that the REACT results will impact future educational efforts. He also reported that the subcommittee toured the REACT Web site and that it looks promising.

Dr. Ornato, chair of the Science Base Subcommittee, reported that the subcommittee discussed the NHAAP's position paper on chest pain centers (See committee's discussion below).

Dr. Ornato reported that Dr. Edward Bartlett gave a presentation to the subcommittee on his efforts to educate primary care physicians about coronary heart disease (CHD) detection. Primary care physicians are the largest target of malpractice lawsuits for overlooking signs of CHD. Dr. Bartlett is interested in collaborating with the NHAAP to disseminate educational materials for primary care physicians.

Dr. Ornato reported that the subcommittee discussed its annual review of new scientific literature on topics of interest to the NHAAP. A copy of this review was provided to representatives at the April 1998 meeting.

Dr. Ornato reported that an update on the report on ED diagnostic technologies will be produced in 6 to 9 months. He also said that the Technology Working Group will examine why proven technologies to address myocardial infarction are not being used, in some cases not even by the institutions that developed them.

DISCUSSION: CHEST PAIN CENTER POSITION PAPER [Drs. Zalenski and Selker]

Dr. Zalenski provided an overview of the chest pain center position paper and recommendations. Dr. Zalenski stated that the paper neither supports nor rejects chest pain centers. The purpose of the paper is to offer recommendations to assist chest pain centers in their mission to improve care for patients with AMI. The paper does not explain how to establish a chest pain center. He added that such centers can be successful if they focus on quality of care rather than marketing. There are currently some 520 chest pain centers in the United States. Most are not separate from the ED. And, they are more likely than EDs without the centers to extend diagnostic protocols and to offer patient counseling regarding risk factors and community education programs.

Dr. Zalenski stressed that chest pain centers must address the need to identify patients with AMI and educate the public that chest pain does not always accompany AMI. Chest pain centers should also emphasize to the public the general principles of seeking rapid and appropriate care in the face of AMI symptoms, rather than marketing specific hospitals—a practice that could cause patient delay due to longer travel times. More research about chest pain centers is needed, and efforts to document outcomes should continue. The centers hold great potential, but the extent to which they outperform EDs alone is not clear.

A discussion of the paper by the committee followed. Several committee members noted that the paper is actually about quality-of-care practices and the need to coordinate care across specialties, rather than an endorsement of chest pain centers. Dr. Horan suggested calling the paper a white paper rather than a position paper, because it does not take a position on the centers and should not, because the evidence is insufficient at this time. Dr. Selker agreed but felt the paper is more than an environmental assessment of the issue. He would like the paper to include some recommendations.

Dr. Atkins reiterated the NHAAP's goal of rapid treatment for AMI within 30 minutes, and said that the logistics of how individual EDs address this goal should be the focus. For example, EDs should not overlook AMI patients in favor of patients with gunshot wounds.

Dr. Curry said the committee needs to clarify its definition of a chest pain center and its recommendations.

Dr. Ornato stated that what is important is that institutions take an interdisciplinary, quality improvement approach with vertically integrated processes, not whether or not they call it a chest pain center and market it as such. He added, however, that the label “chest pain center,” if used, should refer to the fully integrated approach he described. Drs. Selker and MacLeod agreed with Dr. Ornato's assessment, but added that all EDs should take the approach he described and avoid the

labeling of chest pain centers altogether. Dr. Ornato felt that perhaps “chest pain program” was a better term, or perhaps “pain” should not even be part of the term, because chest pain is not always present in AMI patients. Dr. Horan suggested the term “chest pain center/program.”

Drs. Selker and Zalenski said that further revisions would be made to the paper based on comments given at the meeting and that the title will be reconsidered, noting that the committee seemed to be leaning towards “white paper.” The introduction will be broadened, and the paper will be applicable to existing as well as potential chest pain centers. The revised paper will then be mailed to the Coordinating Committee for a vote.

INFORMATICS FOR THE NHAAP: NLM SOLICITATION AND OVERVIEW OF PROPOSALS [Dr. Milton Corn]

Dr. Milton Corn of the NLM gave an overview of the proposals solicited by the NLM following the April symposium “New Information Technology and the National Heart Attack Alert Program: Setting a 5-Year Agenda,” which was cosponsored by the NHLBI, NLM, and the Agency for Health Care Policy and Research. Dr. Corn specified that to be successful the technologies must be proven effective, not just possible, and then the effective technologies must be used.

The medical informatics initiative is a three-phase program. Planning will take place in 1998, followed by modeling in 1999, and wide deployment in 2000. Proposals were permitted to address all three phases of delay identified by the NHAAP: patient/bystander recognition and action, prehospital action, and hospital action. Twenty applications were received. Among those, 14 were considered competitive and, at the end of September, 14 awards were made for contract funding of phase 1, the planning phase. The total amount of the awards made was \$800,000. If the NHLBI receives additional funding, it may be possible to fund additional applicants.

The funded proposals will address a broad range of patients and factors, including older adults; minorities; diverse socioeconomic groups; diverse regions; and urban, suburban, and rural communities. Topics include ED training; patient counseling; educating high-risk patients and ED providers based on key patient data; using telemedicine in rural hospitals to improve diagnostic and management techniques; using computers, phones, and hand-held devices as decision support technologies to help predict AMI; using multimedia kiosks, Web sites, and hotlines for public education; supplying ECGs for emergency transport personnel; and developing and marketing a health channel for high-risk patients.

HEALTHY PEOPLE 2010 [Mr. Frederick Rohde]

Mr. Rohde gave the committee an overview of the Healthy People project, which aims to set the health agenda for the nation. The Healthy People initiative was developed in 1979 and set six targets for 1990. The initiative was successful; all but one of the mortality objectives were met. In the early 1990s, targets were set for the year 2000, comprised of 17 objectives to increase life span, reduce health disparities, and increase prevention.

Healthy People 2010 is now in development. Currently, there are over 550 objectives. The draft initiative, released September 15, will be open for public comment until December 15, 1998. A series of meetings will be held to help finalize the initiatives, including regional meetings and a Secretary's Council meeting. In January 2000, the objectives will be set. Additional details about the process can be found on the Healthy People Web site at <http://web.health.gov/healthypeople/>.

There are four objectives in two areas relating to heart attacks. Specific proposed targets for 2010 are shown in brackets below. All objectives are either measurable or developmental, meaning that data will be collected by 2005 or else the objective will be dropped.

The first area, Access to Quality Health Services (10-C.4), includes the following objectives:

To increase to at least [50] percent the proportion of eligible patients with AMI who receive clot-dissolving therapy within an hour of symptom onset. The target on the previous draft shared with the committee at the April 1998 meeting was 25 percent.

To increase to [90] percent the proportion of persons with witnessed, out-of-hospital cardiac arrest who receive their first therapeutic electrical shock within [7] minutes of collapse recognition, and increase to [50] percent the proportion who receive their first therapeutic electrical shock within [5] minutes of collapse recognition. The previous draft read 90 percent within 10 minutes.

The second area, Heart Disease and Stroke (20-3), includes the following objectives:

To increase to [75] percent the proportion of the U.S. adult public, age 20 and older, who are aware of the early warning symptoms and signs of a heart attack and the importance of accessing rapid emergency care by calling 9-1-1. The previous draft was 50 percent.

To increase to [75] percent the proportion of health care providers who instruct their high-risk patients (those with previously diagnosed cardiovascular disease) and their family members/significant others about the early warning symptoms and signs of a heart attack, including the importance of having an action plan and seeking rapid emergency care by calling 9-1-1. The target on the previous draft was 50 percent.

Dr. Horan advocated setting the bar higher for objectives related to treatment than for objectives related to awareness, because treatment objectives should be more attainable. He also noted that the committee's input concerning the objectives should carry great weight.

Dr. Ornato moved to establish a subgroup of the committee to examine the objectives and make recommendations. Dr. Zalenski seconded the motion. The motion carried. Dr. Johnson, Dr. MacLeod, Ms. Moore, Dr. Ornato, Dr. Rodrigue, Mr. Schneiderman, and Dr. Selker volunteered to

serve on the subgroup. Dr. Horan requested that the committee be kept apprised of their progress through the Listserv.

REPORT ON PUBLIC ACCESS DEFIBRILLATION PHASE 1 (PAD-1) TRIAL

[Dr. Ornato]

Dr. Ornato reported that the PAD-1 Trial has completed its first round of reviews. The trial is following 300 pairs of sites in 30 cities over a 3-year period to determine if providing access to public access defibrillators by trained laypersons would enhance survival of patients with sudden cardiac arrest. The researchers are working to address through redesign two main issues of concern: whether the pool will contain enough sudden cardiac arrest events and whether control sites may become contaminated by acquiring public access to defibrillators.

The American Heart Association (AHA) has pledged \$1 million to the study, and the AHA and manufacturers have provided additional resources. However, more funding is pending from the NHLBI. Dr. Horan stated that the Institute is working on this.

REPORTS FROM ORGANIZATIONS

Dr. Christenson told the committee that the American Association for Clinical Chemistry is seeking cosponsorship of a distance-learning educational effort regarding patients with acute coronary syndromes. He asked for responses from committee members and/or their organizations by November 1.

Dr. Jones suggested that the NHAAP challenge the military to address ischemic heart disease. Dr. Ferguson stated that he would work to bring the issue to Department of Defense (DOD) Health Affairs, but said that other issues are currently higher on the DOD's agenda.

Dr. Michael reported that NHTSA's initiative with EMS providers and managed care organizations is in its second phase. Also, NHTSA is rolling out a new EMS curriculum. An EMS task force has been formed to propose a redesign of the EMS educational system. NHTSA will seek consensus on the redesign at a national conference in April. Dr. Michael asked committee members to contact him with comments on the initiative.

Ms. Moore suggested that the NHAAP may want to collaborate with the National Fire Protection Association regarding initiatives related to EMS, defibrillators, and response times. She reported that the International Association of Firefighters is working with a local union to file a lawsuit arguing that, because firefighters are not supplied with defibrillators or trained to use them, they are not receiving the appropriate equipment and training to perform their jobs.

Dr. Scott advised the committee that the Cochrane Conference will be held October 22-26 in Baltimore. For the first time, the conference will focus on the heart. More information can be found at www.cochrane.org.

CLOSING REMARKS/ADJOURNMENT

Ms. Hand said that she would schedule subcommittee conference calls after the committee meeting report is distributed. The next committee meeting will be held on May 3-4, 1999.

Ms. Hand announced that Dr. Horan is retiring after 23 years of distinguished service to NIH. She thanked him, in particular, for his contributions on behalf of the National High Blood Pressure Education Program, the National Cholesterol Education Program, and the NHAAP.

Ms. Hand adjourned the meeting.



National Heart Attack Alert Program

Executive Committee Meeting

**October 5, 1998
Alexandria, VA**

**NATIONAL HEART ATTACK ALERT PROGRAM (NHAAP)
EXECUTIVE COMMITTEE MEETING**

**Meeting Summary
October 5, 1998**

Participants

James M. Atkins, M.D., F.A.C.C. (Chair)
Bruce MacLeod, M.D., F.A.C.E.P.
Roger B. Rodrigue, M.D., M.P.H.
William J. Schneiderman
Harry P. Selker, M.D., M.S.P.H.

Contract Staff

John Clinton Bradley, M.S.
Claudia Flatau, M.P.H.
Marian Kratage, M.S.
Doreen Major Ryan, M.A.

NHLBI Staff

Mary M. Hand, M.S.P.H., R.N.

WELCOME AND INTRODUCTIONS [Dr. James Atkins]

Dr. Atkins welcomed the participants. Since no new members were present, introductions were not needed.

REPORTS FROM SUBCOMMITTEES [Dr. Mark Johnson, Dr. Bruce MacLeod, Dr. Joseph Ornato]

Dr. Johnson reported that Dr. Christine Crumlish had agreed to serve as vice chair of the Education Subcommittee. He said that the subcommittee met earlier in the day and discussed marketing of the high-risk patient and community planning reports. Also, John Clinton Bradley gave an overview of the Rapid Early Action for Coronary Treatment (REACT) Web site.

Dr. Bruce MacLeod reported that the Health Systems Subcommittee met earlier in the day. The subcommittee reviewed a proposal that was recently submitted to the National Committee for Quality Assurance regarding possible Health Plan Employer Data and Information Set (HEDIS) measures of interest to the NHAAP. The subcommittee also discussed other regulatory organizations with which the NHAAP might partner—including the American Medical Association, State medical societies, and the American Hospital Association. Dr. MacLeod reported that Dr. Jeffrey Michael, of the National Highway Traffic Safety Administration, described a series of roundtables being hosted by his agency on the relationship between managed care and emergency medical services systems. Finally, Dr. MacLeod reported that Dr. Atkins gave an overview of the community planning paper, which was followed by a discussion on marketing the report.

Dr. Ornato reported that the Science Base Subcommittee also met earlier in the day. The chest pain centers position paper (which was to be presented to the Coordinating Committee the next day)

was discussed; several changes were suggested by the subcommittee. The subcommittee also heard that plans for an update of the emergency department diagnostic technologies report were underway.

Dr. Ornato described a presentation given by Dr. Edward Bartlett to the subcommittee regarding an algorithm—developed through an educational grant from the private sector—for primary care practitioners to use in preparing for office cardiac emergencies. The Executive Committee discussed the possibility of the NHAAP adapting this tool and making it available to primary care providers. However, it was decided that this project should be tabled until the resource requirements are determined for translating the REACT trial results into a nationwide campaign. Also, additional research needs to be conducted on copyright issues surrounding this tool. Ms. Hand volunteered that staff would take on this task.

Dr. Ornato reported that the Science Base Subcommittee had a lively discussion on its periodic literature review. Finally, he reported that the subcommittee discussed how the NHAAP should address prodromal symptoms, aspirin, and technology transfer. Regarding this last issue, the subcommittee decided that the Technology Working Group should hold one or two conference calls in the near future to discuss the use of multiple diagnostic technologies in tandem.

PROPOSAL FOR WORKING GROUP ON PRIMARY ANGIOPLASTY AND ACUTE MYOCARDIAL INFARCTION [Dr. Robert Zalenski]

Dr. Robert Zalenski presented a proposal to create a new working group to make recommendations on the use of primary angioplasty as part of a community health care delivery system. After much discussion, it was decided that this project should also be tabled until the resource requirements are determined for translating the REACT trial results into a nationwide campaign.

REVIEW OF COORDINATING COMMITTEE AGENDA [Committee]

The Executive Committee reviewed the agenda for the upcoming Coordinating Committee meeting. It was agreed that comments would be solicited on the chest pain centers paper during the meeting, that revisions would be made afterwards, and that the final version would be sent to representatives for a mail vote.

The committee discussed the importance of the NHAAP Coordinating Committee commenting on the Healthy People 2010 objectives, which have the potential for institutionalizing the recommendations in the community planning report and for collecting heart-attack-related evaluation data.

Mr. Schneiderman expressed concern that NHAAP momentum has been slowed by the change from 6 to 8 months between Coordinating Committee meetings. It was agreed that, in addition to using the Listserv, each subcommittee would hold at least one conference call between meetings.

OVERVIEW OF PLANS FOR INFORMING THE PUBLIC EDUCATION ADVISORY GROUP ABOUT THE RESULTS OF THE REACT RESEARCH PROGRAM
[Dr. Atkins/Ms. Hand]

Ms. Hand gave an overview of the agenda for the Public Education Advisory Group meeting scheduled to commence the following afternoon to hear the results of the REACT study and its implications for a national public education campaign. She stated that three REACT investigators—Dr. Russell Luepker, Dr. John Finnegan, and Dr. James Raczynski —Executive Committee members, and select NHLBI staff would be the only participants. She reiterated that the results should be kept confidential until they are announced at the American Heart Association Scientific Sessions in November. The REACT investigators developed the agenda for the first day and NHLBI staff developed the agenda for the second day. A professional facilitator will be used to help guide discussions on the second day.

NEXT MEETING/ADJOURNMENT [Dr. Atkins]

Dr. Atkins adjourned the meeting.



National Heart Attack Alert Program

Education Subcommittee Meeting

**October 5, 1998
Alexandria, VA**

**NATIONAL HEART ATTACK ALERT PROGRAM (NHAAP)
EDUCATION SUBCOMMITTEE MEETING**

**Meeting Summary
October 5, 1998**

Participants

Mark B. Johnson, M.D., M.P.H. (Chair)
Christine M. Crumlish, Ph.D., R.N. (Vice-Chair)
Angelo A. Alonzo, Ph.D.
Julie Bracken, R.N., M.S., C.E.N.
Charles Curry, M.D.
M. Ray Holt, Pharm.D.
Jay Merchant, M.H.A.
Hannah Ruggiero, R.N., COHN

NHLBI Staff

Mary M. Hand, M.S.P.H., R.N.
Christine Kruttsch, M.S.
Frederick Rohde, M.A.

Contract Staff

John Clinton Bradley, M.S.
Claudia Flatau, M.P.H.
Marian Kratage, M.S.
Doreen Major Ryan, M.A.

WELCOME AND INTRODUCTIONS [Dr. Mark B. Johnson, Chair]

Dr. Johnson welcomed participants and introduced the subcommittee's new vice-chair, Dr. Christine Crumlish. The participants then introduced themselves.

MARKETING PROGRESS REPORTS [Ms. Marian Kratage]

Ms. Kratage reviewed the marketing to date of the paper "Educational Strategies to Prevent Prehospital Delay in Patients at High Risk for Acute Myocardial Infarction: A Report by the National Heart Attack Alert Program." The paper was sent to 80 journals in April, posted on the NHLBI Web site, featured in the National Heart, Lung, and Blood Institute (NHLBI) Information Center's educational materials catalog, and displayed as part of the NHLBI exhibit at several conferences. The paper was sent to journal editors with a cover letter, a copy of the *Action Alert* (hard copy and disk), and a copy of the working group report. To date, the following 11 journals have either covered the paper or have indicated firm interest: *Journal of the American Medical Association*; *Caring*; *Hospital Case Management*; *Case Management Advisor*; *Emergency Medical Services Journal* (*Journal of Emergency Care, Rescue and Transportation*); *SGIM Forum* (*Society for General Internal Medicine*); *American Journal of Nursing*; *Case Review Magazine*; *American Journal of Preventive Medicine*; *Journal of IAFF*; and *ABC Digest of Urban Cardiology*.

Ms. Kratage encouraged the subcommittee members to get on the agendas of professional meetings to present the paper. Upon request, a slide presentation is available for their use.

Dr. Curry suggested drawing connections to the diabetes community, because diabetes is a high-risk factor for coronary heart disease. That topic was the focus of a recent article in the *New*

England Journal of Medicine. In addition, a paper was just published by the National Kidney Foundation on cardiovascular disease. Ms. Kratage said that perhaps a subsequent mailing to these groups should be considered.

Ms. Kratage then discussed the marketing plan for the paper “Access to Timely and Optimal Care of Patients With Acute Coronary Syndromes—Community Planning Considerations: A Report by the National Heart Attack Alert Program.” The plan includes two strategies. First, a cover letter and special issue of the *Journal of Thrombosis and Thrombolysis* were mailed to 3,211 members of the National Association of EMS Physicians, the National Association of State EMS Directors, and the American Public Health Association sections for Community Health Planning and Policy Development, and Injury Control and Emergency Health Services. Second, a cover letter, a copy of the *Action Alert*, and an order form for a complimentary copy of the special journal issue were sent to the 3,179 members of the National Association of County and City Health Officials.

REPORT ON JOURNAL ARTICLES IN DEVELOPMENT [Ms. Mary Hand]

Ms. Hand reported that the NHAAP has two articles in development for publication in journals. First, Dr. Crumlish sent to Ms. Hand a draft of an article on acute myocardial infarction (AMI) and the benefits of early treatment. The article will appear in the April 1999 issue of *MEDSURG Nursing*, the journal of the Academy of Medical-Surgical Nurses, which has a readership of 7,000 to 8,000 people.

Second, The *American Journal of Nursing*, which has a readership of 370,000, has requested an article on the NHAAP with an emphasis on acute care and home care settings, AMI, and communicating with families. The article, slated to appear in its May 1999 issue, must be 10 to 12 double-spaced pages (about 3,000 words) and is due by December. Ms. Hand prepared and distributed an outline of the article and asked for comments and volunteer co-writers. Dr. Crumlish, Ms. Julie Bracken, and Ms. Hannah Ruggiero volunteered.

Mr. Merchant suggested that a related article, with a lay spin targeted to older adults and their families, be submitted to the American Association of Retired Persons for possible publication in its magazine *Modern Maturity*. Dr. Curry agreed that lay publications are a good forum and suggested that the NHAAP could use them to teach people to rehearse what to do in case of AMI.

UPDATE ON REACT RESULTS AND NEXT STEPS [Ms. Hand]

Ms. Hand noted that the results of the REACT study, commissioned by the NHLBI in 1994, will be announced publicly on November 9 at the American Heart Association meeting. The written results will be submitted to a peer-reviewed journal following the announcement.

Ms. Hand summarized the work of the NHAAP since 1991, when data revealed delays of 1.5 hours in treatment from time of arrival in the ED. Accordingly, the program has focused on EDs and increasing the rapidity of treatment for AMI. With the release of the REACT results approaching, the NHAAP has formed an advisory group to assist the program in planning a public education campaign

based on the REACT results. The advisory group will consist of three REACT investigators, the Executive Committee of the Coordinating Committee, and select NHLBI staff. There will be a closed-door debriefing on the REACT results the following day. She then identified several key questions to be answered to determine the NHAAP's next steps regarding a national public education campaign: What audiences should be targeted? What messages are valid? What communication vehicles would be best?

Finally, Ms. Hand commented on two examples of key misconceptions revealed by focus groups conducted by REACT: women associate heart attacks with overweight middle-aged businessmen and they don't see themselves as at risk; and, people with a previous MI see themselves as protected from future events. These findings were incorporated into the development of the intervention tools used in REACT.

Mr. Merchant asked subcommittee members if they were familiar with popular magazines such as *Men's Health*, and whether the NHAAP should try to place stories in such magazines. Dr. Atkins supported the idea, but cautioned that the magazines tend to be influenced by paid advertisers, and that the NHAAP does not buy advertising. Also, the accuracy of such magazines varies; so, the NHAAP must be vigilant about ensuring the accuracy of any stories it generates. Ms. Kruttsch noted that within the NHLBI, lay publications fall under the public relations arena, while professional publications fall under marketing. In the case of lay publications, the public relations staff sends accurate statements to editors and writers, but cannot always prevent a publication from placing an inaccurate spin on the resulting story.

PRESENTATION OF THE REACT WEB SITE [Mr. John Clinton Bradley]

Mr. Bradley gave the participants a tour of the REACT Web site, which is located at <http://epihub.epi.umn.edu/react/>. The site was designed by the REACT investigators to distribute information about the REACT study. It explains the study, provides tools for replicating it in communities, discusses the problem of patient delay, and provides educational information for communities and professionals. Visitors can download information and send an e-mail to the REACT investigators. Access to the site was originally restricted to residents of the 10 REACT control communities, but now anyone can register and enter the site. From there, visitors can reach four sections: community organization, community education, professional education, and patient education.

The site resides at the University of Minnesota. It currently is not linked to the NHLBI Web site, but probably will be in the future. To date, marketing is limited to the REACT communities. Once the REACT results are released, the site probably will be more widely marketed. Mr. Merchant suggested marketing the site to the American Hospital Association for its Web site and newspaper.

REVIEW OF EDUCATIONAL PRIORITIES [Ms. Hand]

Ms. Hand reviewed the NHAAP's educational focus areas as identified at the program's 1996 retreat. At that time, professional education was assigned to both the Education and Health Systems

subcommittees. The target audience was defined as physicians in primary care, family practice, internal medicine, and obstetrics and gynecology; physicians moonlighting in EDs; and training programs. Education of high-risk patients and the general public/bystanders also was assigned to the Education Subcommittee. So the subcommittee's purview is all of these target audiences.

In addition to the efforts already discussed, Ms. Kruttsch noted that targets of her educational efforts include continuing medical education organizations, faculty, and professional organizations. Ms. Kratage noted that the NHLBI Information Center's educational materials catalog is mailed to 80,000 people, including faculty. A new catalog currently is in production.

ADJOURNMENT [Dr. Johnson]

Dr. Johnson asked for suggestions for additional agenda items for the next meeting. The meeting was then adjourned.



National Heart Attack Alert Program

Health Systems Subcommittee Meeting

**October 5, 1998
Alexandria, VA**

**NATIONAL HEART ATTACK ALERT PROGRAM (NHAAP)
HEALTH SYSTEMS SUBCOMMITTEE MEETING**

**Meeting Summary
October 5, 1998**

Participants

Bruce MacLeod, M.D., F.A.C.E.P. (Chair)
William J. Schneiderman (Vice Chair)
James M. Atkins, M.D., F.A.C.C.
Oscar W. Clarke, M.D., F.A.C.P.
David W. Ferguson, M.D., CAPT MC USN
Wayne H. Giles, M.D., M.S.
Jay Merchant, M.H.A.
Jeffrey Michael, Ed.D.
Lori Moore, M.P.H., EMT-P
Roger B. Rodrigue, M.D., M.P.H.
Harry P. Selker, M.D., M.S.P.H.
Joanne Wilkinson, M.D.

NHLBI Staff

Mary M. Hand, M.S.P.H., R.N.
Christine Kruttsch, M.S.

Contract Staff

John Clinton Bradley, M.S.
Claudia Flatau, M.P.H.
Marian Kratage, M.S.
Doreen Major Ryan, M.A.

WELCOME AND INTRODUCTIONS [Dr. Bruce MacLeod]

Dr. MacLeod welcomed participants and invited everyone present to introduce themselves. He then gave an overview of the meeting packets.

**PROPOSAL TO THE NATIONAL COMMITTEE FOR QUALITY ASSURANCE (NCQA)
FOR EMERGENT CARDIOVASCULAR MEASURES: STATUS [Dr. MacLeod]**

Dr. MacLeod reviewed the three emergent cardiovascular care measures that the Outcome Measures Working Group had proposed to Mr. Joshua Seidman of the NCQA for inclusion in the next version of the Health Plan Employer Data and Information Set (HEDIS). Dr. MacLeod noted that although several others measures might have been proposed by the NHAAP to the NCQA, the working group considered these most important to be included in HEDIS.

Ms. Mary Hand reported on a recent telephone conversation she had with Mr. Seidman regarding the status of the measures submitted by the working group. Mr. Seidman had no specific news about the objectives. However, he did say that the NCQA was struggling with the inclusion of hospital-related measures, because they often reflect more about the care that is given by hospitals than by health care plans. He also commented that any measure that relied upon reviewing medical records would be considered burdensome.

It was agreed that Ms. Hand and Dr. Joanne Wilkinson would initiate a conference call with Mr. Seidman to answer any concerns he might have about the NHAAP's proposed measures.

SUGGESTIONS FROM COORDINATING COMMITTEE REPRESENTATIVES FOR OTHER INSTITUTIONAL MEASURES OR PARTNERSHIPS [Dr. MacLeod]

Dr. MacLeod reported that only two suggestions for other potential institutional measures or partnerships had been received from Coordinating Committee representatives. These were the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) and the American Medical Accreditation Program (AMAP), the American Medical Association's physician accreditation program. There was some discussion on the nature of each organization's measures and consensus that both would be appropriate partners for the NHAAP. Ms. Hand volunteered to contact Ms. Margaret Van Amringe, director of JCAHO's Washington office, about possible partnership opportunities. Drs. Oscar Clarke, Harry Selker, and Joanne Wilkinson volunteered to investigate partnership opportunities with AMAP. Dr. Selker also expressed interest in exploring a partnership with the Massachusetts Medical Society, which has developed a local accreditation program similar to AMAP.

The American Hospital Association (AHA) was also discussed as another potential partner. Ms. Hand noted that this organization was a member of the NHAAP Coordinating Committee, but currently without a representative. Ms. Linda Magno of AHA's policy division was recommended as a contact. Ms. Hand agreed to contact Ms. Magno regarding partnership opportunities.

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION (NHTSA) MANAGED CARE AND EMERGENCY MEDICAL SERVICES (EMS) ROUNDTABLE DISCUSSIONS [Dr. Jeffrey Michael]

Dr. Jeffrey Michael, Chief of the Emergency Medical Services Division of NHTSA, discussed his agency's EMS Agenda for the Future initiative. He shared copies of an implementation guide containing approximately 80 objectives for the future of emergency medical services. (Please note: A digital version of this document can be accessed at <http://www.nhtsa.dot.gov/people/injury/ems/agenda/>.) Dr. Michael said that 10 of these objectives relate to EMS and managed care. To foster a constructive dialogue between EMS and managed care, NHTSA is sponsoring a series of roundtable discussions to address issues of common concern.

Dr. Michael said that three meetings of the roundtable have been held so far—in June 1997, January 1998, and June 1998—with the number and diversity of participants increasing with each meeting. He distributed newsletters summarizing the results of each meeting. (Please note: A digital copy of the first newsletter can be accessed online at <http://www.nhtsa.dot.gov/people/injury/ems/bulletin/bullet97.pdf/>.)

Subcommittee members expressed support for the roundtable process and offered Dr. Michael some suggestions for enhancing its effectiveness.

The next roundtable meeting is scheduled for January 1999. Dr. Michael offered to report on the fourth roundtable meeting on EMS and managed care at the next subcommittee meeting.

COMMUNITY PLANNING PAPER REVIEW [Dr. James Atkins]

Dr. James Atkins gave an overview of “Access to Timely and Optimal Care of Patients with Acute Coronary Syndromes—Community Planning Considerations: A Report by the National Heart Attack Alert Program.” He noted that the paper was published as part of the July 1998 issue of *Journal of Thrombosis and Thrombolysis (JTT)*, which included two other papers by the NHAAP.

MARKETING OF COMMUNITY PLANNING PAPER AND DISCUSSION ABOUT ITS DISSEMINATION AND IMPLEMENTATION [Ms. Mary Hand & Ms. Marian Kratage]

Ms. Marian Kratage described the plan for marketing the community planning paper. She said that members of the National Association of EMS Physicians, the National Association of EMS Directors, and two sections of the American Public Health Association (APHA)—about 3,200 people—will receive copies of the *JTT* issue containing the report with a cover letter from Ms. Hand. An additional 3,200 members of the National Association of County and City Health Officials will receive a letter from Ms. Hand with an order form for a complimentary copy of the issue.

In addition to these efforts, the full text of the report and the slide show presented by Dr. Atkins will be available for downloading from the NHAAP page of the NHLBI Web site at <http://www.nhlbi.nih.gov/nhlbi/othcomp/opec/nhaap/nhaapage.htm/>.

The subcommittee suggested additional marketing strategies for the report. These included:

The following groups should be targeted: State commissioners of public health, State cardiovascular disease program directors, and directors of community affairs (or public affairs) in hospitals.

A workshop on this paper should be placed on the agenda of the 1999 APHA conference.

A joint letter to hospital administrators from Dr. Lenfant and the chief executive officer of the American Hospital Association.

A letter from each Coordinating Committee representative to the members of their organization focusing on the relevance of the paper for that audience.

NEXT MEETING/ADJOURNMENT [Dr. MacLeod]

Dr. MacLeod noted that the next meeting of the subcommittee will be held on May 3, 1999. He thanked the members for their participation and adjourned the meeting.



National Heart Attack Alert Program

Science Base Subcommittee Meeting

**October 5 1998
Alexandria, VA**

**NATIONAL HEART ATTACK ALERT PROGRAM (NHAAP)
SCIENCE BASE SUBCOMMITTEE MEETING**

**Meeting Summary
October 5, 1998**

Participants

Joseph P. Ornato, M.D., F.A.C.C., F.A.C.E.P. (Chair)
Robert J. Zalenski, M.D., M.A. (Vice-Chair)
James M. Atkins, M.D., F.A.C.C.
Robert Christenson, Ph.D.
Arthur A. Ciarkowski, B.S.C.L.E., M.S.E., M.P.A.
Charles Curry, M.D.
Denise Hirsch, M.D.
Bruce MacLeod, M.D., F.A.C.E.P.
Robert A. McNutt, M.D.
Jane D. Scott, Sc.D., M.S.N., R.N.
Harry P. Selker, M.D., M.S.P.H.
Mark S. Smith, M.D.
Pamela Steele, M.D., M.P.H.
Daniel Stryer, M.D.

Guests

Dr. Edward Bartlett

NHLBI Staff

Mary M. Hand, M.S.P.H., R.N.
Fred Rohde, M.A.

Contract Staff

John Clinton Bradley, M.S.
Claudia Flatau, M.P.H.
Doreen Major Ryan, M.A.

WELCOME AND INTRODUCTIONS [Dr. Joseph Ornato, Chair]

Dr. Ornato welcomed all participants. He introduced himself and asked everyone to introduce themselves.

STATUS REPORT: CHEST PAIN CENTERS POSITION PAPER [Dr. Robert Zalenski and Dr. Harry Selker]

Dr. Zalenski reported that all Coordinating Committee members were mailed the final draft of the paper for review. He has received some feedback and made a few changes. He and Dr. Selker plan to discuss the most recent changes during the Coordinating Committee meeting and solicit any additional comments.

Dr. Curry asked for clarification of the position taken in the paper on chest pain centers. Dr. Selker replied that the paper's position is that chest pain centers have the potential to improve quality of care, but depending on how they are implemented, individual centers may or may not be achieving this potential. The position stated in the paper is that chest pain programs, whether explicitly labeled "chest pain centers" or not, should focus on quality of care rather than marketing. Particularly, the centers should not encourage patients with chest pain to go to a particular center rather than to the

nearest hospital. It is more important to have the appropriate services and processes in place than the label of chest pain center.

Several members of the group commented that they thought the paper was well done. Dr. McNutt commented that he liked the point about quality of care, but that the paper is clearly describing a system of care. He argued that the paper should explain more clearly how to set up a chest pain center—in other words, what is needed to produce appropriate outcomes. Dr. Selker and Dr. Zalenski emphasized that the paper attempts to explain what a chest pain center should do, which may not differ from what an emergency department (ED) would do. However, Dr. Zalenski agreed that if a reader cannot determine from the paper how to implement the processes needed to improve the quality of care, then the paper should be revised further.

After a lengthy discussion, the decision was made to revise the paper to clarify that its position is not *for* or *against* chest pain centers; rather, the paper is promoting integrated systems of care that improve quality of care. The paper will be presented at the Coordinating Committee meeting with provisional revisions. A vote by mail will be held later.

STATUS REPORT: EMERGENCY DEPARTMENT TECHNOLOGIES WORKING GROUP UPDATE [Ms. Mary Hand]

In January 1997, an NHAAP working group published an evaluation of technologies for identifying patients with acute cardiac ischemia in the ED. Because this is a rapidly changing area, an update on the report is in progress. Dr. Joseph Lau and staff at New England Medical Center—one of the Agency for Health Care and Policy Research (AHCPR) Evidence-based Practice Centers—have been awarded a contract to review the relevant literature and prepare an evidence report. A conference call was recently held with Dr. Lau, Dr. Zalenski, and NHLBI staff to discuss the logistics for conducting the literature review. The Technologies Working Group will then review their initial work and revise it, if necessary, based on the evidence report.

Dr. Selker reported that he was excited about this approach, especially because it will use a more efficient process and should yield a better product. While working group members will provide input, their level of effort to complete the paper will be much less than the previous report.

STATUS REPORT: CHEST PAIN CRITICAL PATHWAYS PAPER [Ms. Mary Hand]

In Dr. Cannon's absence, Ms. Hand reported on progress to develop a science-based paper on critical pathways for managing patients with chest pain. Dr. Cannon is chairing the group and has produced a first draft, which was distributed to working group members. Both a journal article and a Web page are planned. The Web site will include examples of critical pathways.

EARLY DIAGNOSIS OF UNSTABLE ANGINA AND ACUTE MI: OVERVIEW OF MATERIALS FOR PRIMARY CARE PHYSICIANS [Dr. Edward Bartlett]

Ms. Hand introduced Dr. Edward Bartlett, coordinator of the Early Diagnosis Steering Committee, which is sponsored by educational grants from Frontier Health Care in Bedford Hills, New York, and Florida Physicians Insurance Company in Jacksonville, Florida. This program is developing diagnostic protocols for primary care providers. He feels that his group has some common interests with the NHAAP.

Dr. Bartlett explained that health care companies originally sought his help because failure by primary care physicians to diagnose an acute myocardial infarction (AMI) is one of the top five reasons for malpractice suits against primary care providers. The focus of the project is on quality of care rather than liability, and aims to improve primary care providers' knowledge and practice. After much research, including reviewing several NHAAP publications, the group found very little information for primary care providers. One of the few things they found was a brief statement in an NHAAP publication, *Patient/Bystander Recognition and Action: Rapid Identification and Treatment of Acute Myocardial Infarction*, saying that the patient's decision to consult with his/her primary care physician often resulted in delays in treatment.

Dr. Bartlett then presented a brief overview of the document this group developed and the methods used to develop it. The key piece of the document is a one-page treatment algorithm, which is accompanied by notes of definitions and exceptions. Also, there is a page on indications for thrombolytic therapy and there are two pages of patient handouts that physicians can copy and distribute. Finally, there is a page of information on liability issues, such as causes of delay to treatment.

Dr. Bartlett indicated that the document is endorsed by some State medical societies, including the New York Society of Internal Medicine and Florida Chapter of the American College of Emergency Physicians. He expressed the desire to share the publication with the Coordinating Committee and solicit suggestions for improvement and methods of distribution. Ms. Hand indicated that the NHAAP has mechanisms for distributing such publications if the Coordinating Committee decides it is worthwhile.

Dr. Selker commented that he thought the document was well done and more useful than anything he has seen to date. However, there are a few details that need revision. For example, the algorithm says that there should be no more than 30 minutes before calling an ambulance, when in many cases there should be no delay. Dr. Bartlett responded that this was a compromise given all the possible circumstances. Other subcommittee members provided additional comments, but generally approved of the tool. Dr. Bartlett was responsive to these comments. He indicated that while the document was copyrighted, it was not proprietary. His organization hopes the document can serve as a guideline for other organizations to adapt.

A discussion took place regarding how the NHAAP might utilize this document. Similar tools might be developed for primary care providers on other heart attack issues, such as equipping offices with automated external defibrillators and having telephone triage procedures. No final decisions were made about an action item. However, it was agreed that the Executive Committee would discuss some options on how to proceed.

SCIENCE BASE SUBCOMMITTEE LITERATURE REVIEW [The Subcommittee]

A literature review covering MEDLINE records from November 1, 1996, to January 31, 1998, was distributed at the April 1998 Science Base Subcommittee. That meeting was shorter than usual; therefore, discussion of the review was tabled until this meeting. Below are the noteworthy articles identified by subcommittee members:

PHASE I: Patient/Bystander Aspects and Actions

Part A. Variables Associated With Patient Delay

Dr. Scott brought attention to a Spanish study regarding whether consulting with an out-of-hospital physician before going to the hospital resulted in delay of thrombolytic therapy.¹ The investigators found that this did result in a significant delay in treatment.

Part B. Patient/Bystander Behavior

Dr. Stryer brought attention to an Australian study that gives some idea of messages to be used in a public education campaign.² It found some significant indicators of delay to treatment, including low education level, the patient's embarrassment about asking for help, and problems with recognition of some symptoms. He also mentioned an article that compared use of protocol-based prehospital care to online medical control.³ The investigators found that use of protocols slightly improved both on-scene time and the appropriateness of therapeutic decisions.

Part C. Sudden Cardiac Death and Out-of-Hospital Cardiac Arrest

No articles of note.

Part D. High-Risk Patients

No articles of note.

Part E. Prodromal Symptoms

No articles of note.

¹ Ochoa Gomez, F. J.; Carpintero Escudero, J. M.; Ramalle-Gomara, E.; Aguilar, P. M.; Saralegui Reta, I., and Caton, V. L. [Delayed thrombolytic administration in myocardial infarction; (see comments)]. *Med Clin (Barc)*. 1997 Apr 5; 108(13):481-4.

² Dracup, K.; McKinley, S. M., and Moser, D. K. Australian patients' delay in response to heart attack symptoms [see comments]. *Med J Aust*. 1997 Mar 3; 166(5):233-6.

³ Rottman, S. J.; Schriger, D. L.; Charlop, G.; Salas, J. H., and Lee, S. On-line medical control versus protocol-based prehospital care. *Ann Emerg Med*. 1997 Jul; 30(1):62-8.

PHASE II: Prehospital Aspects and Actions

Part A. 9-1-1

Dr. Ornato discussed the “Call Fast, Call 911” direct mail campaign.⁴ It found that only those at highest risk were influenced and that the campaign did not result in a high number of false positives.

Part B. Emergency Medical Dispatching

No articles of note.

Part C. EMS Systems Configurations

Dr. Ornato reported on a fascinating study looking at the involvement of law enforcement personnel in EMS.⁵ It found that 60 percent of respondents to the survey (police chiefs and sheriffs) agreed that they should be involved in EMS activities and that they would support appropriate medical training for their staff.

Part D. Prehospital Thrombolytic Therapy

Dr. Ornato mentioned a case series from Europe.⁶ This article indicates that thrombolytic infusions administered during CPR may be useful in some cases. He noted that this is quickly becoming a very controversial issue.

⁴ Meischke, H.; Dulberg, E. M.; Schaeffer, S. S.; Henwood, D. K.; Larsen, M. P., and Eisenberg, M. S. 'Call fast, Call 911': a direct mail campaign to reduce patient delay in acute myocardial infarction.

⁵ Alonso-Serra, H. M.; Delbridge, T. R.; Auble, T. E.; Mosesso, V. N., and Davis, E. A. Law enforcement agencies and out-of-hospital emergency care. *Ann Emerg Med.* 1997 Apr; 29(4):497-503. CODEN: 2c; ISSN: 0196-0644.

⁶ Tiffany, P. A.; Schultz, M., and Stueven, H. Bolus thrombolytic infusions during CPR for patients with refractory arrest rhythms: outcome of a case series. *Ann Emerg Med.* 1998 Jan; 31(1):124-6.

Part E. Automatic External Defibrillators

Two articles were mentioned because they related to studies comparing biphasic to monophasic shocks.^{7,8} There are a whole range of patterns that can be considered biphasic. The American Heart Association (AHA) is developing a position statement on this issue. The AHA concluded that, at this point, both are equally defensible. Implantable defibrillators are mostly biphasic these days mostly because the devices require lower energy levels. It's clear that for external devices, more research is necessary.

Part F. Prehospital 12-Lead ECG

No articles of note.

Part G. Prehospital Diagnostic Technologies

No articles of note.

PHASE III: Hospital Aspects and Actions

Part A. New and Current Diagnostic Technologies and Tests

Attention was called to an article on testing for cardiac troponin markers.⁹ Based on retrospective data, the article concludes that troponin testing could facilitate the rapid and effective triage of patients with chest pain in the ED. A related article showed a positive relationship between time to development of a positive assay to mortality risk.¹⁰ Dr. Zalenski commented that there were

⁷ Bardy, G. H.; Marchlinski, F. E.; Sharma, A. D.; Worley, S. J.; Luceri, R. M.; Yee, R.; Halperin, B. D.; Fellows, C. L.; Ahern, T. S.; Chilson, D. A.; Packer, D. L.; Wilber, D. J.; Mattioni, T. A.; Reddy, R.; Kronmal, R. A., and Lazzara, R. Multicenter comparison of truncated biphasic shocks and standard damped sine wave monophasic shocks for transthoracic ventricular defibrillation. *Transthoracic Investigators. Circulation.* 1996 Nov 15; 94(10):2507-14.

⁸ Poole, J. E.; White, R. D.; Kanza, K. G.; Hengstenberg, F.; Jarrard, G. T.; Robinson, J. C.; Santana, V.; McKenas, D. K.; Rich, N.; Rosas, S.; Merritt, S.; Magnotto, L.; Gallagher, J. V. 3rd; Gliner, B. E.; Jorgenson, D. B.; Morgan, C. B.; Dillon, S. M.; Kronmal, R. A., and Bardy, G. H. Low-energy impedance-compensating biphasic waveforms terminate ventricular fibrillation at high rates in victims of out-of-hospital cardiac arrest. *LIFE Investigators. J Cardiovasc Electrophysiol.* 1997 Dec; 8(12):1373-85.

⁹ Hamm, C. W.; Goldmann, B. U.; Heeschen, C.; Kreymann, G.; Berger, J., and Meinertz, T. Emergency room triage of patients with acute chest pain by means of rapid testing for cardiac troponin T or troponin I [see comments]. *N Engl J Med.* 1997 Dec 4; 337(23):1648-53.

¹⁰ Antman, E. M.; Sacks, D. B.; Rifai, N.; McCabe, C. H.; Cannon, C. P., and Braunwald, E. Time to positivity of a rapid bedside assay for cardiac-specific troponin T predicts prognosis in acute coronary syndromes: a Thrombolysis in Myocardial Infarction (TIMI) 11A substudy [In Process Citation]. *J Am Coll Cardiol.* 1998 Feb; 31(2):326-30.

very few articles about combination therapy, except for one by Wu, et al.¹¹ Another article looked at automated electrocardiograms (ECGs) obtained every 20 minutes.¹² It was found to be more sensitive for diagnosis of high-risk patients than the initial ECG. One committee member also commented that one article found that time to initial ECG does not affect predictive value.¹³

Part B. Chest Pain Centers

Two articles were highlighted. One by Dr. Zalenski, et al., highlights the different clinical characteristics of ED patients at low risk for acute cardiac ischemia who were assigned to a chest pain observation service versus those admitted to a monitored inpatient bed for “rule-out acute myocardial infarction.”¹⁴ An Irish descriptive study found that a chest pain clinic was well received and provided an efficient method of identifying patients with acute coronary syndromes and minimized unnecessary admissions.¹⁵ This may have implications for managed care.

Part C. ED Delay Factors

No articles of note.

Part D. Primary Percutaneous Transluminal Coronary Angioplasty

No articles of note.

¹¹Wu, A. H.; Feng, Y. J.; Contois, J. H., and Pervaiz, S. Comparison of myoglobin, creatine kinase-MB, and cardiac troponin I for diagnosis of acute myocardial infarction. *Ann Clin Lab Sci.* 1996 Jul-1996 Aug 31; 26(4):291-300.

¹²Fesmire, F. M.; Percy, R. F.; Bardoner, J. B.; Wharton, D. R., and Calhoun, F. B. Usefulness of automated serial 12-lead ECG monitoring during the initial emergency department evaluation of patients with chest pain. *Ann Emerg Med.* 1998 Jan; 31(1):3-11.

¹³Singer, A. J.; Brogan, G. X.; Valentine, S. M.; McCuskey, C.; Khan, S., and Hollander, J. E. Effect of duration from symptom onset on the negative predictive value of a normal ECG for exclusion of acute myocardial infarction. *Ann Emerg Med.* 1997 May; 29(5):575-9.

¹⁴Zalenski, R. J.; Rydman, R. J.; McCarren, M.; Roberts, R. R.; Jovanovic, B.; Das, K.; Mensah, E. K., and Kampe, L. M. Feasibility of a rapid diagnostic protocol for an emergency department chest pain unit [see comments]. *Ann Emerg Med.* 1997 Jan; 29(1):99-108.

¹⁵el Gaylani, N.; Weston, C. F.; Shandall, A.; Penny, W. J., and Buchalter. Experience of a rapid access acute chest pain clinic. *Ir Med J.* 1997 Jun-1997 Jul 31; 90(4):139-40.

Part E. Time to Treatment in the ED and Outcome

One article¹⁶ discussed ways to decrease time to treatment, especially prehospital time. Another presents a chest pain critical pathway and continuous quality improvement process.¹⁷

Part F. AMI Management and Treatment in the ED

Dr. Lambrew, who was unable to attend, submitted a written comment regarding an article that also dealt with the use of critical pathways.¹⁸ Dr. Selker mentioned that there were several articles dealing with registries and what has been learned from them.

Part G. Unstable Angina Treatment and Non-Q-Wave MI

One article concluded that the optimal duration of heparin therapy for unstable angina is up to 48 hours after admission.¹⁹ Dr. Cannon, who also was not able to attend, provided written comments on an article regarding the PURSUIT trial.²⁰

Part H. Anticoagulants

No articles of note.

Part I. Thrombolytic Therapy

Dr. Selker called attention to an article that showed that Canadian physicians are using national guidelines appropriately.²¹

¹⁶Califf, R. M. and Newby, L. K. How much do we gain by reducing time to reperfusion therapy? Am J Cardiol. 1996 Dec 19; 78(12A):8-15.

¹⁷Nichol, G.; Walls, R.; Goldman, L.; Pearson, S.; Hartley, L. H.; Antman, E.; Stockman, M.; Teich, J. M.; Cannon, C. P.; Johnson, P. A.; Kuntz, K. M., and Lee, T. H. A critical pathway for management of patients with acute chest pain who are at low risk for myocardial ischemia: recommendations and potential impact. Ann Intern Med. 1997 Dec 1; 127(11):996-1005.

¹⁸Bing, M. L.; Abel, R. L.; Sabharwal, K.; McCauley, C., and Zaldivar, K. Implementing a clinical pathway for the treatment of Medicare patients with cardiac chest pain. Best Pract Benchmarking Healthc. 1997 May-1997 Jun 30; 2(3):118-22.

¹⁹Klein, L. W.; Wahid, F.; VandenBerg, B. J.; Parrillo, J. E., and Calvin, J. E. Comparison of heparin therapy for < or = 48 hours to > 48 hours in unstable angina pectoris. Am J Cardiol. 1997 Feb 1; 79(3):259-63.

²⁰Harrington, R. A. Design and methodology of the PURSUIT trial: evaluating eptifibatide for acute ischemic coronary syndromes. Platelet Glycoprotein IIb-IIIa in Unstable Angina: Receptor Suppression Using Integrilin Therapy. Am J Cardiol. 1997 Aug 18; 80(4A):34B-38B.

²¹Schull, M.; Battista, R. N.; Brophy, J.; Joseph, L., and Cass, D. Determining appropriateness of coronary thrombolysis in the emergency department. Ann Emerg Med. 1998 Jan; 31(1):12-8.

Part J. Other Methods of Myocardial Perfusion

No articles of note.

Part K. Coronary Artery Bypass Grafting/Revascularization

No articles of note.

PHASE IV: General/Crosscutting Aspects and Actions

Part A. Cost-Benefit, Economic and Reimbursement Aspects

Dr. Scott mentioned an article that found no association between copayment requirements and delays in seeking care.²² She noted another article that looked at frequency of laboratory tests, turnaround time, and length of stay.²³ The investigators found that hospitals with more frequent delivery of lab tests had shorter lengths of stay. Dr. Stryer called attention to an article that discussed the implications of procedure underutilization.²⁴ This is a hot topic at the Agency for Health Care Policy and Research (AHCPR) and the Health Systems Subcommittee may wish to consider this.

Part B. Professional Education Considerations

No articles of note.

Part C. Patient Education Considerations

No articles of note.

Part D. Public Education Considerations

No articles of note.

²²Magid, D. J.; Koepsell, T. D.; Every, N. R.; Martin, J. S.; Siscovick, D. S.; Wagner, E. H., and Weaver, W. D. Absence of association between insurance copayments and delays in seeking emergency care among patients with myocardial infarction [see comments]. *N Engl J Med*. 1997 Jun 12; 336(24):1722-9.

²³Wu, A. H. and Clive, J. M. Impact of CK-MB testing policies on hospital length of stay and laboratory costs for patients with myocardial infarction or chest pain [see comments]. *Clin Chem*. 1997 Feb; 43(2):326-32.

²⁴Kravitz, R. L. and Laouri, M. Measuring and averting underuse of necessary cardiac procedures: a summary of results and future directions. *Jt Comm J Qual Improv*. 1997 May; 23(5):268-76.

Part E. Health Care Systems

Dr. Scott drew attention to articles coauthored by Dr. Selker²⁵ and Dr. Ornato.²⁶ The first looked at AHCPR guidelines for unstable angina and concluded that following the guidelines actually increased the number of low-risk patients admitted. The second article discussed evaluation and triage of chest pain patients using risk stratification strategies.

Part F. Overall Time To Treatment and/or Patient Outcome Considerations

No articles of note.

Part H. Ethical Aspects

No articles of note.

Part I. Demographic and Cultural Considerations

One article looked at diagnoses of AMI and angina pectoris in African Americans and whites.²⁷ It found that African Americans were less likely to be diagnosed with AMI.

Part J. Medico-Legal Aspects

No articles of note.

Part K. New Information Technologies

Attention was called to an article that discussed reduction in treatment delay by enabling ECG diagnosis of myocardial infarction by the paramedics so patients are admitted directly to the critical care unit.²⁸

²⁵Katz, D. A.; Griffith, J. L.; Beshansky, J. R., and Selker, H. P. The use of empiric clinical data in the evaluation of practice guidelines for unstable angina [see comments]. *JAMA*. 1996 Nov 20; 276(19):1568-74.

²⁶Tatum, J. L.; Jesse, R. L.; Kontos, M. C.; Nicholson, C. S.; Schmidt, K. L.; Roberts, C. S., and Ornato, J. P. Comprehensive strategy for the evaluation and triage of the chest pain patient [see comments]. *Ann Emerg Med*. 1997 Jan; 29(1):116-25.

²⁷Maynard, C.; Beshansky, J. R.; Griffith, J. L., and Selker, H. P. Causes of chest pain and symptoms suggestive of acute cardiac ischemia in African-American patients presenting to the emergency department: a multicenter study. *J Natl Med Assoc*. 1997 Oct; 89(10):665-71.

²⁸Millar-Craig, M. W.; Joy, A. V.; Adamowicz, M.; Furber, R., and Thomas, B. Reduction in treatment delay by paramedic ECG diagnosis of myocardial infarction with direct CCU admission. *Heart*. 1997 Nov; 78(5):456-61.

SUDDEN CARDIAC DEATH: RESEARCH/FUTURE HORIZONS [Dr. Spooner]

Dr. Spooner was unable to attend the meeting, so this presentation was tabled.

OTHER ISSUES [Ms. Mary Hand]

Prodromal Symptoms: How Should the NHAAP Address Them?

Ms. Hand said that as the program moves into public education, there may be a need to educate physicians and patients about the very early signs of AMI. Last year, a medical student who was working with Ms. Hand put together a background paper on this topic. The paper needs additional refinement, but when finished it may provide some further thought as to whether to have this as part of an educational campaign. There is a need to look at this issue systematically and decide how to use this information in the program.

Dr. Christenson asked if it would be possible to do a meta-analysis to create stronger evidence. Dr. Selker pointed out that most of the literature on this topic is descriptive or a review of previous work. Dr. Selker thought perhaps this could be part of a campaign directed toward primary care physicians. Dr. Ornato suggested that the Rapid Early Action for Coronary Treatment (REACT) study will help answer how to address this issue.

Ms. Hand will revise the paper and distribute it to the subcommittee before addressing this issue further.

Role of Aspirin in Future Public Education Messages

Ms. Hand asked whether the use of aspirin should be part of a public education campaign. For example, should the public be told to give a chest pain patient aspirin as they dial 9-1-1? There are movements by the Health Care Financing Administration and other groups to have EMS personnel administer aspirin. Several committee members indicated their wariness of giving this message to the public. There is no way to ethically test the impact of such a campaign. Further, there is concern that the science base for this recommendation is weak.

Technology Transfer

Dr. Selker asked whether the Technology Working Group should be assigned the task of examining the transfer of new technologies and continued use of impractical technologies, and then making recommendations about this topic at the next meeting. It was agreed that the Technology Working Group should hold a conference call to discuss this issue further.

ADJOURNMENT

Dr. Ornato adjourned the meeting.